REMARKS

Further and favorable reconsideration is respectfully requested in view of the foregoing amendments and following remarks.

Claims 1-9 were pending when examined.

Claim 1 is amended to recite that the charge-transporting group X is "a naphthalenediimide group" or "a phenyldiimide group" from claim 2, and to recite that L is represented by the formula A_1-R_1-A_2 from claim 3, the result of which claims 2 and 3 are cancelled.

Claim 5 is amended, as suggested by the Examiner, to include a double bond in the imidazole ring between the carbon atoms at the fused intersection. The specification is also amended to correct the formula.

Claim 6 is amended to delete the first recitation of "R_3".

Claims 1-9 are also amended to place them in more convention form according to U.S. practice by making minor editorial changes that are self-explanatory.

I. Claim Rejections Under 35 U.S.C. § 112

The Examiner rejects claim 5 under 35 U.S.C. § 112, second paragraph, as being indefinite. As suggested by the Examiner, claim 5 has been amended to replace the formula with a new formula having a double bond between the carbon atoms at the fused intersection, rendering the rejection moot.

The Examiner rejects claim 6 under 35 U.S.C. § 112, second paragraph, as being indefinite for having variable R_3 defined twice. Claim 6 has been amended to delete the first recitation of R_3, rendering the rejection moot.

II. Claim Rejections Under 35 U.S.C. §§ 102 and 103

The Examiner rejects claim 1 under 35 U.S.C. § 102(b) as being anticipated by Okada (JP 2003-217856); rejects claim 3 under 35 U.S.C. § 102(a) and (e) as being anticipated by Li et al. (US 2004/0219387; US 6,830,834) ("Li"); rejects claim 2 under 35 U.S.C. § 103(a) as being unpatentable over Okada in view of Hong et al. ("Hong"); rejects claims 4 and 6 under 35 U.S.C. § 103(a) as being unpatentable over Okada in view of Tashiro et al. (US 5,059,863) ("Tashiro '863"); rejects claim 5 under 35 U.S.C. § 103(a) as being unpatentable over Okada in view of Mataga et al. (JP 2003-133072) ("Mataga"); rejects claim 7 under 35 U.S.C. § 103(a) as being unpatentable over Okada in view of Tashiro et al. (JP 2000-282024) ("Tashiro '024"); rejects claim 8 under 35 U.S.C. § 103(a) as being unpatentable over Okada in view of Ishida et al. (JP 2003-157977) ("Ishida"); and rejects claim 9 under 35 U.S.C. § 103(a) as being unpatentable over Okada in view of Nakatsuka et al. (JP 2003-151778) ("Nakatsuka").

As applied to the amended claims, Applicant respectfully traverses the rejections.

A. Okada

The Examiner rejects claim 1 under 35 U.S.C. § 102(b) as being anticipated by Okada.

Amended claim 1 recites that "X represents a charge-transporting group selected from the group consisting of a naphthalenediimide group and a phenyldiimide group," from non-rejected claim 2.

On page 5, lines 12-13, the Examiner acknowledges that Okada does not disclose an electron-transporting group where X is a naphthalenediimide group or a phenyldiimide group.

Accordingly, Okada does not teach each and every feature of amended claim 1, and thus does not anticipate claim 1.

Claims 4-9 depend directly from claim 1, and thus are also not anticipated by the reference.

B. Li

The Examiner rejects claim 3 under 35 U.S.C. § 102(a) and (e) as being anticipated by Li.

The features of claim 3 have been incorporated into claim 1, and claim 3 has been cancelled. Thus, amended claim 1 recites an organic EL device comprising an emission layer containing an organic EL dye formed by linking a light-emitting group Y represented by the

formula: $(Y\text{-}L)_nX_m$ to a charge-transporting group X, and "**L is a linking group bonding the charge-transporting group and the light-emitting group**, and L is represented by the formula $A_1\text{-}R_1\text{-}A_2$..."

Li discloses a compound wherein a **pyrene** is linked to a **carbazole group** through a linking group. However, the reference does not teach the combination of a charge-transporting group X, which is **a naphthalenediimide group or a phenyldiimide group, and** the light-emitting group Y, where Y represents the specific compounds recited in claim 1.

Therefore, Li does not teach or suggest an organic EL dye formed by linking a light-emitting group Y represented by the formula: $(Y\text{-}L)_nX_m$ to a charge-transporting group X, and L is a linking group bonding the charge-transporting group and the light-emitting group, and L is represented by the formula
$A_1\text{-}R_1\text{-}A_2$, as recited amended claim 1.

Moreover, as a preferred embodiment, Li teaches that "the compound is a dopant in a host layer wherein the host layer is substantially made of a compound which has substantially the same chemical structure as the dopant's host moiety" (see col. 3, lines 21-24 of US 6,831,834), and that in the preferred embodiment, the compound "is used as a dopant deposited in a host material" (see col. 5, lines 28-32 of US 6,831,834). Li employs the dopant-host system in all of the examples.

However, the present invention does not require a dopant-host system. Rather, the present invention is directed to an organic EL device comprising an emission layer containing an organic EL dye formed by linking a light-emitting group Y represented by the formula: $(Y\text{-}L)_nX_m$ to a charge-transporting group X, wherein X represents a charge-transporting group of **a naphthalenediimide group or a phenyldiimide group.**

Therefore, one of ordinary skill in the art would have had no reason or rationale to combine Li and the other cited references.

Moreover, the present invention has superior light-emitting properties, as compared to the reference.

Accordingly, claim 1 is not anticipated by Li, and claim 1 would not have been rendered obvious by Li. Claims 4-9 depend directly from claim 1, and thus also are not anticipated by the reference, and would not have been obvious over the reference.

C. **Okada in view of Hong**

The Examiner rejects claim 2 under 35 U.S.C. § 103(a) as being unpatentable over Okada in view of Hong.

Amended claim 1 recites that "X represents a charge-transporting group selected from the group consisting of a naphthalenediimide group and a phenyldiimide group" from claim 2, and that **"L is a linking group bonding the charge-transporting and the light-emitting group, and L is represented by the formula A_1-R_1-A_2"** from claim 3.

Accordingly, the Okada and Hong fail to teach or suggest **"L is a linking group bonding the charge-transporting and the light-emitting group, and L is represented by the formula A_1-R_1-A_2,"** and thus do not teach or suggest all of the features of amended claim 1.

Moreover, as discussed above, Okada does not teach "a charge-transporting group selected from the group consisting of a naphthalenediimide group and a phenyldiimide group," as recited in amended claim 1.

Hong discloses a naphthalenediimide group **as an electron-transporting material.** However, Hong does not teach or suggest a **linking group bonding** the charge-transporting group (i.e., a naphthalenediimide group or a phenyliimide group) and the light-emitting group, as recited in amended claim 1.

Accordingly, claim 1 would not have been obvious over Okada in view of Hong.

Claims 4-9 depend directly from claim 1, and thus also would not have been obvious over the references.

D. **Okada and Tashiro '863**

The Examiner rejects claims 4 and 6 under 35 U.S.C. § 103(a) as being unpatentable over Okada in view of Tashiro '863.

Tashiro '863 is cited by the Examiner for disclosing organic luminescent compounds. However, Tashiro '863 does not teach or suggest an organic EL device comprising an emission layer containing an organic EL dye formed by linking a light-emitting group Y represented by the formula: $(Y\text{-}L)_nX_m$ to a charge-transporting group X, wherein X represents a charge-transporting group of a naphthalenediimide group or a phenyldiimide group, and L is a linking group bonding the charge-transporting group and the light-emitting group, represented by the formula A_1-R_1-A_2, as recited in claim 1.

Accordingly, claim 1 would not have been obvious over Okada in view of Tashiro '863.

Claims 4-9 depend directly from claim 1, and thus also would not have been obvious over the references.

E. Okada in view of Mataga

The Examiner rejects claim 5 under 35 U.S.C. § 103(a) as being unpatentable over Okada in view of Mataga.

Mataga is cited by the Examiner for disclosing a light-emitting element in an organic EL device.

However, the reference does not teach or suggest an organic EL device comprising an emission layer containing an organic EL dye formed by linking a light-emitting group Y represented by the formula: $(Y\text{-}L)_nX_m$ to a charge-transporting group X, wherein X represents a charge-transporting group of a naphthalenediimide group or a phenyldiimide group, and L is a linking group bonding the charge-transporting group and the light-emitting group, represented by the formula $A_1\text{-}R_1\text{-}A_2$, as recited in claim 1.

Accordingly, claim 1 would not have been obvious over Okada in view of Mataga.

Claims 4-9 depend directly from claim 1, and thus also would not have been obvious over the references.

F. Okada in view of Tashiro '024

The Examiner rejects claim 7 under 35 U.S.C. § 103(a) as being unpatentable over Okada in view of Tashiro '024.

Tashiro '024 is cited by the Examiner for disclosing a thiadiazole derivative as a light-emitting group.

However, the reference does not teach or suggest an organic EL device comprising an emission layer containing an organic EL dye formed by linking a light-emitting group Y represented by the formula: $(Y\text{-}L)_nX_m$ to a charge-transporting group X, wherein X represents a charge-transporting group of a naphthalenediimide group or a phenyldiimide group, and L is a linking group bonding the charge-transporting group and the light-emitting group, represented by the formula $A_1\text{-}R_1\text{-}A_2$, as recited in claim 1.

Accordingly, claim 1 would not have been obvious over Okada in view of Tashiro '024.

Claims 4-9 depend directly from claim 1, and thus also would not have been obvious over the references.

G. Okada in view of Ishida

The Examiner rejects claim 8 under 35 U.S.C. § 103(a) as being unpatentable over Okada in view of Ishida.

Ishida is cited by the Examiner for disclosing a tetraphenylthiophene derivative to be used as a light-emitting element in an organic EL device.

However, the reference does not teach or suggest an organic EL device comprising an emission layer containing an organic EL dye formed by linking a light-emitting group Y represented by the formula: $(Y\text{-}L)_nX_m$ to a charge-transporting group X, wherein X represents a charge-transporting group of a naphthalenediimide group or a phenyldiimide group, and L is a linking group bonding the charge-transporting group and the light-emitting group, represented by the formula $A_1\text{-}R_1\text{-}A_2$, as recited in claim 1.

Accordingly, claim 1 would not have been obvious over Okada in view of Ishida.

Claims 4-9 depend directly from claim 1, and thus also would not have been obvious over the references.

H. Okada in view of Nakatsuka

The Examiner rejects claim 9 under 35 U.S.C. § 103(a) as being unpatentable over Okada in view of Nakatsuka.

Nakatsuka is cited by the Examiner for disclosing a tetraphenylthiophene derivative to be used as a light-emitting element in an organic EL device.

However, the reference does not teach or suggest an organic EL device comprising an emission layer containing an organic EL dye formed by linking a light-emitting group Y represented by the formula: $(Y\text{-}L)_nX_m$ to a charge-transporting group X, wherein X represents a charge-transporting group of a naphthalenediimide group or a phenyldiimide group, and L is a linking group bonding the charge-transporting group and the light-emitting group, represented by the formula $A_1\text{-}R_1\text{-}A_2$, as recited in claim 1.

Accordingly, claim 1 would not have been obvious over Okada in view of Nakatsuka.

Claims 4-9 depend directly from claim 1, and thus also would not have been obvious over the references.

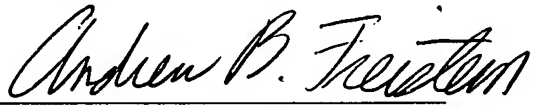
III. Conclusion

For these reasons, Applicant takes the position that the presently claimed invention is clearly patentable over the applied references.

Therefore, in view of the foregoing amendments and remarks, it is submitted that the rejections set forth by the Examiner have been overcome, and that the application is in condition for allowance. Such allowance is solicited.

Respectfully submitted,

Shinichiro ISOBE

By 

Andrew B. Freistein
Registration No. 52,917
Attorney for Applicant

WMC/ABF/rgf
Washington, D.C. 20005-1503
Telephone (202) 721-8200
Facsimile (202) 721-8250
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